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## (54) ENVIRONMENT CLEANING MATERIAL AND ITS PRODUCTION

### (57)Abstract:

PROBLEM TO BE SOLVED: To effectively and safely carry out the cleaning of environment such as the removal of a malodor, the decomposition and removal of a harmful material or contaminant in air or the treatment of waste water by coating the surface of a substrate whose surface is made of titanium dioxide with a porous calcium phosphate film.

SOLUTION: Water and nitric acid are added to titanium tetraisopropoxide to prepare a transparent titanium dioxide sol and granular alumina as a carrier is dip-coated with the sol and fired at 550° C. These processes are repeated three times to form a substrate surface-coated with a titanium dioxide film. The surface of the substrate is then coated with a porous calcium phosphate film. The resultant environment cleaning material enables the cleaning of environment such as the removal of a malodor, the decomposition and removal of a harmful material or contaminant in air, the treatment of waste water, the purification of water or antibacterial and antimold treatment in an effective, profitable and safe manner.

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